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Alliance OF AUTOMOBILE
MANUFACTURERS

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NHTSA-2001-8876-9

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Via Messenger

The Honorable Jeffrey W. Runge, M.D.
 Administrator
 National Highway Traffic Safety Administration
 400 Seventh Street, S.W.
 Washington, D.C. 20590

Dear Dr. Runge:

**Re: Petition for Rulemaking to Amend Federal Motor Vehicle Safety Standard No. 101,
 Controls and Displays**

The Alliance of Automobile Manufacturers respectfully petitions the National Highway Traffic Safety Administration (NHTSA) to amend Federal Motor Vehicle Safety Standard No. 101, *Controls and Displays*, to eliminate the requirement that manufacturers place the identification of vehicle system controls "on or adjacent to the control." This petition proposes to require instead that the identification of a vehicle system operated by a control must be visible to the driver when he is seated in accordance with the provisions of S6 of the standard and when he is controlling that system. The Alliance believes that this amendment would address what has become an inadvertent design restriction on technologically advanced vehicle control and display systems. The Alliance believes that such an amendment is needed to facilitate the introduction of advanced vehicle control and display systems that can enhance vehicle safety by reducing the need for a driver to take his or her eyes off the roadway to operate multiple vehicle controls and by reducing the potential for driver confusion that could arise from "information overload" from multiple identification symbols on a single control.

An original purpose of Standard No. 101's requirements was to limit driver distraction from the driving task. The standard was adopted over 30 years ago as one of the "initial" Federal motor vehicle safety standards and did not originally require manufacturers to place the identification of vehicle controls "on or adjacent to the control". See 32 Fed. Reg. 2408 (Feb. 3, 1967). The requirement first appeared in a 1971 final rule, although there was no discussion regarding why it was being included. See 36 Fed. Reg. 503 (Jan. 14, 1971). NHTSA's statements in subsequent Standard No. 101 rulemakings indicate that its purpose was to simplify the identification of controls and displays and "to reduce the problems resulting from driver's attention being diverted from the roadway to his controls and displays." 43 Fed. Reg. 2754 (June 26, 1978) (emphasis added).

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In recent years, some manufacturers have used electronic images on small screens to identify some vehicle systems, such as air conditioning or fan speed, and NHTSA has agreed through interpretations that such images can constitute the required "identification" of the controls of those systems for purposes of FMVSS No. 101. See, e.g., Interpretation letter from Frank Seales, Jr., Chief Counsel, to anonymous manufacturer, dated June 8, 2000, agreeing that video screen images corresponding to switches that are located below the video images are sufficiently close to the switches that the video images are considered to be "on or adjacent to" to the switches, and therefore compliant with FMVSS No. 101. Implicit in this interpretation was a conclusion that the control did not have to be identified unless the vehicle system corresponding to that control was in operation. In other words, the air conditioning system control did not have to be identified on the video screen unless the air conditioning system was being operated.

New developments in technology have enabled manufacturers to take this concept further, and to design sophisticated electronic displays identifying vehicle systems that may be controlled through a single, multifunctional control, rather than through separate controls. Electronic identifications can be displayed on a screen mounted on a vehicle's instrument panel that is readily visible to a restrained driver. Such a display could allow a driver to activate a vehicle system, or to check easily on the status of various vehicle systems, without having to look down and away from the road. Also, advances in technology have enabled the development of vehicle controls that can operate more than one vehicle system, e.g., air conditioning, heating, and radio, or other vehicle systems. These multifunction controls eliminate the need for a driver to reach and operate multiple controls while driving. Instead, a driver can easily operate several vehicle functions through one readily accessible control.


The Alliance is concerned that Standard No. 101's current requirements discourage, and may effectively prohibit, the introduction of this type of driver friendly control and display system, despite its potential safety benefits. S5.2.1(a) of Standard No. 101 provides that the identification for a vehicle control "shall be placed on or adjacent to the control." NHTSA has interpreted this provision to require "the switches and the images/identification" to be in "close proximity" to one another. Letter from John Womack, Acting Chief Counsel to David Robertson, Environmental & Safety Engineering, Mazda North America Operations (February 28, 2001). However, FMVSS No. 101 discourages or effectively prohibits the type of advanced control and display system discussed above, because the identification of the vehicle system being operated by a multifunctional control would be on the video screen, and may not be "in close proximity" to the control itself. Even if the requirement of the standard could be met literally by identifying on the multifunctional control every vehicle system control identified on Table 1, such a plethora of symbols, words or abbreviations on the same control would likely be more confusing to the driver than permitting the video identification of the particular system(s) being operated.

NHTSA has taken steps in the past to address concerns that Standard No. 101 could inhibit the design and development of vehicle control systems which can "effectively present to the driver specific information concerning vehicle and environmental conditions affecting safety." See 43 Fed. Reg. 2754 (June 26, 1978). In 1978, NHTSA amended the standard to respond to manufacturers' concerns that a proposed revision of FMVSS No. 101 could hinder "the design and development of electronic 'readout' panels" that effectively presented to the driver particular information concerning vehicle safety. See 43 Fed. Reg. 2754 (June 26, 1978). NHTSA explained that it supported "the development of more efficient and effective control and display information systems" and had revised its proposed rule accordingly "so as not to impede the development of electronic displays." *Id.* NHTSA is statutorily directed to issue standards that are performance based rather than design restrictive. The Alliance believes that the current control identification provisions, which were adopted over 30 years ago, have become unnecessarily design restrictive in light of current technology. Consistent with its actions in the past to encourage the development of electronic displays and with its statutory mandate to avoid unnecessary design restrictions, NHTSA should amend Standard No. 101 to encourage the development and use of advanced vehicle control and display systems in the United States.

Nearly 30 years ago in a 1973 Notice of Proposed Rulemaking, NHTSA noted that "[p]roperly located, effectively identified, and correctly illuminated controls and displays can reduce the amount of time a driver must divert his attention from the road, and increase his effectiveness as a safe vehicle operator." See 38 Fed. Reg. 26940 (Sept. 27, 1973). The Alliance believes that this statement is still true today. The Alliance is concerned, however, that NHTSA's current requirements are discouraging or effectively prohibiting the introduction of advanced control and display systems that could further the purpose of the standard by reducing the amount of time a driver must look away from the road in order to locate and operate vehicle system controls.

For the foregoing reasons, the Alliance respectfully petitions the National Highway Traffic Safety Administration (NHTSA) to revise 49 C.F.R. Part 571.101, *Controls and Displays*. The Alliance believes that revising Standard No. 101 as proposed in this petition in this manner will enhance motor vehicle safety and improve driver convenience. Suggested amendatory language is included in Appendix A.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert Strassburger", is written over a horizontal line.

Robert Strassburger
Vice President
Vehicle Safety and Harmonization
Alliance of Automobile Manufacturers

cc: Docket Management, PL-401

Attachment

APPENDIX A

Paragraphs S5.2.1(a) of Section 571.101 is revised to read as follows:

[NOTE: For ease of the reader, new material is shown as underlined. The only substantive deletion is the sentence referring to the requirement that the "identification shall be placed on or adjacent to the control."]

(a)(1) Except as specified in §5.2.1(b), any vehicle system operated by a hand-operated control listed in column 1 of Table 1 that has a symbol designated for it in column 3 of that table shall be identified by either the symbol designated in column 3 (or symbol substantially similar in form to that shown in column 3) or the word or abbreviation shown in column 2 of that table. Any such control for which no symbol is shown in Table 1 shall be identified by the word or abbreviation shown in column 2. Words or symbols in addition to the required symbol, word or abbreviation may be used at the manufacturer's discretion for the purpose of clarity. Any vehicle system operated by such a control for which column 2 of Table 1 and/or column 3 of Table 1 specifies "Mfr. Option" shall be identified by the manufacturer's choice of a symbol, word or abbreviation, as indicated by that specification in column 2 and/or column 3.

(2) Under the conditions of S6, each hand operated control listed in column 1 of Table 1 shall be visible to the driver and each identification required by subsection (a)(1) shall be visible to the driver when the control is operating the corresponding vehicle system. Hand-operated controls listed in column 1 of Table 1 may be combined. Except as provided in S5.2.1.1, S5.2.1.2. and S5.2.1.3, when identification required by subsection (a)(1) is required by this section to be visible to the driver, it shall appear to the driver perceptually upright. The vehicle's owner's manual must explain the operation and identification of the hand operated controls listed in column 1 of Table 1.